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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,784	02/13/2002	Ingo Blume	30394-CIP	9749

5179 7590 08/27/2003

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EXAMINER

DRODGE, JOSEPH W

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 08/27/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,784

Applicant(s)

BLUME ET AL.

Examiner

Joseph W. Drodge

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other:

Art Unit: 1723

NON-FINAL REJECTION

Figure 1 should be labeled "Prior Art" since the figure only shows acknowledged existing subject matter.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 1723

Claims 1-5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chancellor patent 5,914,041 in view of Chenoweth patent 4,125,463 and Eckman patent 5,470,469 of record.

Chancellor discloses an assembly comprising pressure vessel 30, feed connection 86, filtrate connection 86, membrane modules 45, the modules each having holders/end caps 72,78, a bundle of membranes of any selected type (column 4, lines 41-54) and feed through non-permeable conduits (figures 3 and 4), including conduit 76/78 in the annular space between wall of the housing of the modules and pressure vessel [as in claims 3 and 5] and conduit 74 within the module housing wall [as in claim 2]. Note particularly column 3, lines 19-34 regarding details of the modules.

The claims firstly differ in requiring the bundled membranes to comprise capillary type bundled membranes such as hollow fiber membrane bundles. However, Chenoweth teaches in column 5, lines 13-40 to use such membranes in the environment (sea water desalination) of Chancellor since such membrane types are effective for desalination, and have low energy consumption, while Eckman teaches such membrane bundles in column 4, lines 28-59 as readily installable and is also directed to desalination. It would have been obvious to one of ordinary skill in the art to have utilized capillary, hollow fiber type membranes in the membrane bundles of Chancellor, as taught by Chenoweth and Eckman, because such membranes are readily installable, effective for desalination and consume low amounts of energy.

The claims also differ in the functionally recited requirement that the membranes bundles direct flow from inside/out within the membranes. Eckman teaches that

Art Unit: 1723

membrane bundles in series may be directed to either inside/out or outside/in flow in column 5, lines 14-30. It would have been further obvious to one of ordinary skill in the art to have adapted the inlets and outlets of the Chancellor to flow elements so as to cause inside/out flow in the membrane bundles, as taught by Eckman, since Eckman teaches that the orientation of flow through the membrane bundles is readily changeable depending upon the requirements of the water treatment and distribution system to which the membrane arrangement is a part of .

If necessary, recitation of the direction of flow through the membrane bundles is not accompanied by the recitation of any corresponding structure and is of relatively limited patentable weight.

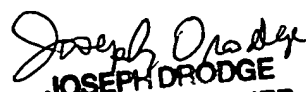
Regarding claim 4, figure 8 of Chancellor best shows a structurally serial arrangement of membrane modules.

Regarding claim 7, the metallic materials disclosed in column 4, lines 25-27 of Chancellor are inherently of rigid, smooth surfaces.

Regarding claim 6, Eckman further teaches to use spacers in serially arranged membrane modules in a pressure vessel for added support of the bundles (see column 8, lines 5-13 discussing spacers 53).

Any inquiry concerning this communication from the examiner should be directed to Joseph W. Drodge whose telephone number is (703) 308-0403 on Monday-Friday from approximately 8:30 AM – 4:45 PM. The fax phone number for this group is (703) 892-9306.

JWD August 14, 2003


JOSEPH DRODGE
PRIMARY EXAMINER